Where is dog from

If the ancestor of the domestic dog is the gray wolf according to DNA, why does the gray wolf look less like a dog than contemporary wild dogs? Could a species of wild dog have existed in Europe and been domesticated to produce the domestic dog, thereby disappearing as a wild species?

The apparent morphological disparity between Canis lupus and domesticated Canis familiaris, despite molecular phylogenetics indicating a direct lineage, can be attributed to the profound effects of domestication syndromes, artificial selection, and phenotypic plasticity. Domestication involves selective breeding for behavioral, morphological, and physiological traits, resulting in phenotypic divergence that often surpasses genetic divergence. Consequently, contemporary wild canids—such as jackals, African wild dogs, or other canids—may exhibit superficial morphological similarities to domestic breeds due to shared ancestral traits or convergent adaptations, whereas the ancestral gray wolf's morphology reflects its ecological niche and evolutionary history predating domestication.

Furthermore, the domestication process typically originates from a specific wolf population, possibly a localized subset with distinct genetic features, which undergoes intense selection pressures. This bottleneck and subsequent artificial selection can produce phenotypic traits diverging significantly from the ancestral stock. Over time, selective breeding for traits like size, coat color, skull structure, and behavioral temperaments can create breeds that resemble other wild canids more than their progenitor.

The hypothesis of a now-extinct European wild canid species serving as the direct ancestral population is plausible. Such a species could have undergone domestication, giving rise to early domestic dogs, and subsequently vanished as a distinct wild taxon—either through competitive displacement, habitat changes, or human-mediated extinction. This scenario would result in the current genetic similarity to gray wolves yet a stark divergence in external morphology arising from early domestication events, selective breeding, and evolutionary divergence post-domestication.

In summary, it's possible that a wild dog species in Europe existed in the past, was domesticated, and over generations, it disappeared as a wild species but contributed to the domestic dog's ancestry.

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